

## **M2-ITB (Translational Immunology & Biotherapies)**

The ITB theme offers scientific and medical students with theoretical and practical training in applied immunology, focusing on biotherapies and more specifically immunotherapies and new vaccine strategies. This training will enable students to understand the challenges and problems of these new therapeutic approaches, as well as an in-depth knowledge of new diagnostic and therapeutic tools (monoclonal antibodies and derived products, vaccines, gene therapy, cell therapy and biotherapies).

The training may also have a "professionalizing" objective aimed at preparing future graduates for professional integration. This option will be based on courses linked to the world of business and entrepreneurship as well as a 6-month internship in a company.

The training is given in English.

### **PUBLIC :**

Scientific students enrolled in the Master's programme, physicians, pharmacists, veterinarians, engineers with the necessary prerequisites for a total of 25 students.

This course is also open to continuous training.

### **ORGANISATION :**

The programme includes the following courses:

Course	credits
ITB specialisation (From November to January)	12 ECTS
Scientific Analysis (From October to January)	6 ECTS
Scientific Project (November-December)	6 ECTS
Opening (From September to May)	6 ECTS
6-month laboratory internship (From January to June)	30 ECTS

### **ITB specialisation course (MU5BM534, 12 ECTS)**

An in-depth presentation of currently developed innovative therapies, particularly in relation to the use of monoclonal antibodies, gene therapies, cell therapies and vaccine innovations will be offered in the form of lectures given by invited academic and industrial experts/researchers.

### **Scientific analysis course (MU5BM051, 6 ECTS)**

This course aims to develop the skills of scientific analysis in the field of research and development. The students will work on their capacity of analysis and their aptitude to summarize, and to criticize scientific documents (articles, research projects, development projects...).

### **Scientific project course (MU5BM091, 6 ECTS)**

The aim of this course is to develop the ability to draw up a project - scientific or otherwise - in the field of research, development, management, communication, etc. During this course, students will have to master the drawing up of a document on which they or others can base their decision on the feasibility of the project described. This will take form as a grant proposal

### **Opening course (of your choice, 6 ECTS)**

Within the framework of the general curriculum of the "Molecular and Cellular Biology" Master's degree, students have the possibility of freely choosing one or more opening courses for a total credit of 6 ECTS (1 x 6 ECTS) or (2 x 3 ECTS). This choice must allow students to complete their Master's training in order to deepen their knowledge within the course or to open up to related or complementary themes. Depending on the opening courses chosen, students will be able to acquire training that will enable them to pursue a doctoral course or immediate professional integration.

### **Internship (5BMSO7, 30 ECTS)**

The internship, of a maximum duration of 6 months, will be initiated at the end of the course (mid-January), possibly starting before the beginning of the course, when possible, within a research team (in France or abroad) in an academic environment or a company. The project that will be entrusted to the student trainee must be in line with the theme of the course.

A detailed report of the activity will be required, which will be defended orally in June or September.

### **CONTACTS :**

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